

19981213.ba v02_n337.bam.981213

>From ???@??? Mon Dec 14 02:00:41 1998
Message-Id: <199812132131.PAA15800@sco.theporch.com>
Date: Sun, 13 Dec 1998 15:30:37 CST
Subject: BOATANCHORS digest 2337

BOATANCHORS Digest 2337

Topics covered in this issue include:

- 1) Re: Dyna-monsters
by "Tom Bowes" <kk8m@home.com>
- 2) RAO-6 Parts Wtd
by "Steve" <scb@mail.internettport.net>
- 3) Astatic Mic
by "Steve" <scb@mail.internettport.net>
- 4) Impedance Bridge
by "Jay H. Miller" <jmiller@teleteam.net>
- 5) Re: Impedance Bridge
by "Mike B. Feher" <n4fs@monmouth.com>
- 6) 35W4 rectifier tube needed
by Thomas Lewandowski <tpl.dsc@discnet.com>
- 7) Re: Dyna-monsters
by Bill Hawkins <bill@iaxs.net>
- 8) Re: Dyna-monsters
by Andre Guibert <aguibert@sympatico.ca>
- 9) One-hour fix for your KWM-1 PT0
by Jim Garland W8ZR <4CX250B@miavx1.acs.muohio.edu>
- 10) Re: One-hour fix for your KWM-1 PT0
by Sandra L Knepper <slkst29+@pitt.edu>
- 11) Mil Tuning Units Sold
by "James D. Mayfield" <kb9bnr@revealed.net>
- 12) Impedance Bridge- Clarification
by "Jay H. Miller" <jmiller@teleteam.net>
- 13) Re: Impedance Bridge- Clarification
by Al Parker <anchor@coastalnet.com>
- 14) Re: Impedance Bridge
by kf4kl@ipass.net (Doug Hall)
- 15) Re: Impedance Bridge- Clarification
by Henry van Cleef <vancleef@netcom.com>
- 16) HR050 dial strips and 833 regen query
by Mark Shaum <k9tr@cwix.com>
- 17) RE: HR050 dial strips and 833 regen query
by "Ed Tanton" <n4xy@mindspring.com>
- 18) of (RF) bridges and their ilk...
by "Roberta J. Barmore" <rbarmore@indy.net>

From: "Tom Bowes" <kk8m@home.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Dyna-monsters
Date: Sat, 12 Dec 1998 23:01:12 -0500
Message-ID: <01be264d\$3927cec0\$07f90218@cc588013-a.mcmb1.mi.home.com>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Bob,

Although I can't speak as to your present situation, I can say that the dynamotor in my BC-348 doesn't impart a lot of noise into the receiver. Perhaps you have already done this, but if not, you need to clean and repack the bearings for the dynamotor, PRONTO! Do not run the thing with 40-year-old or even 20-year-old grease in them there bearings. First of all, the thing will drag, which will cause excessive brush sparking and additional noise in the receiver. Secondly, if you smoke the dyno it will most likely be a pain to find a new one. As far as putting in a solid, or vacuum, state supply for the thing, it's not the way I would go. Life is more fun when your radio comes whirring to life as a prerequisite for its use.

Best Wishes

Tom/KK8M
-----Original Message-----
From: Robert Nickels <ranickel@mwci.net>
To: Old Tube Radios <boatanchors@theporch.com>
Date: Saturday, December 12, 1998 8:18 PM
Subject: Dyna-monsters

>Hi All,

>

>Recently acquired an R-648/ARR-41 receiver which is meant for airborne
>operation from a 28 volt supply. B+ is provided by an internal dynamotor,
>and this is my first experience with one. How in the world did they hear
>anything over the EMI and acoustic noise?

Message-Id: <199812130435.WAA05150@loki.internettport.net>
From: "Steve" <scb@mail.internettport.net>
To: Old Tube Radios <boatanchors@theporch.com>
Date: Sat, 12 Dec 1998 22:17:03 +0000
MIME-Version: 1.0

Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT
Subject: RA0-6 Parts Wtd

Greetings;

Trolling the list for RA0-6 sheet metal. Need the(2) bottom covers & hdwr, 1st RF tube compartment cover& hdwr, Ext Ant terminal box & hdwr. Shockmount base CNA-10125(?) would be nice too. Thanx for any assistance.

Regards; Steve

Message-Id: <199812130435.WAA05167@loki.internettport.net>
From: "Steve" <scb@mail.internettport.net>
To: Old Tube Radios <boatanchors@theporch.com>
Date: Sat, 12 Dec 1998 22:17:03 +0000
MIME-Version: 1.0
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT
Subject: Astatic Mic

Greetings;

I have an Astatic D-2 double diaphragm crystal hand mic Ser #3676 , looks like the mics in '30s/40s cartoons ala Smilin' Jack or Flash Gordon.

Does anyone have info/ age on this classy paperweight? (It's deader than Hogans' goat, damp southern climate). Thanx.

Regards; Steve

Message-Id: <103130300b298f55242f2@[199.34.24.23]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Sat, 12 Dec 1998 22:41:07 -0600
To: Old Tube Radios <boatanchors@theporch.com>
From: "Jay H. Miller" <jmiller@teleteam.net>
Subject: Impedance Bridge

I'd like to acquire a decent impedance bridge-signal generator-detector instrument suitable for some serious antenna work-- i.e. several steps up from the MFJ-259

Any suggestions?

***** ##### *****

Jay H. Miller, KK5IM Dallas, Texas

The Pocket Guide to Collins Amateur Radio Equipment

ARRL * AMI#846 * DXCC

E-Mail: jmiller@teleteam.net

Visit My Home Page: <http://www.teleteam.com/~jmiller/>

***** Proud to be 100% Macintosh since 1984! *****

Message-ID: <006701be266f\$027b1a40\$a71bbfd1@n4fs>

From: "Mike B. Feher" <n4fs@monmouth.com>

To: Old Tube Radios <boatanchors@theporch.com>

Subject: Re: Impedance Bridge

Date: Sun, 13 Dec 1998 00:03:00 -0800

MIME-Version: 1.0

Content-Type: text/plain;
charset="iso-8859-1"

Content-Transfer-Encoding: 7bit

You can probably buy a GR-1606A for about the same amount but to tell the truth since I got my MFJ-259 about 4 years ago I have not used mine. Being able to know $R \pm jX$ is fine for one time measurements but after that a conjugate match will work well on that frequency. Also most antennas can be made pretty close just by simple equations. Besides with the 1606 you need a source and a detector. I think the 259 is the best product developed by MFJ.
73 - Mike

Mike B. Feher, N4FS

89 Arnold Blvd.

Howell, NJ, 07731

732-901-9193

-----Original Message-----

From: Jay H. Miller <jmiller@teleteam.net>

To: Old Tube Radios <boatanchors@theporch.com>

Date: Saturday, December 12, 1998 8:43 PM

Subject: Impedance Bridge

>I'd like to acquire a decent impedance bridge-signal generator-detector
>instrument suitable for some serious antenna work-- i.e. several steps up
>from the MFJ-259

>

>Any suggestions?

>

> ***** #*****# *****
> Jay H. Miller, KK5IM Dallas, Texas
> The Pocket Guide to Collins Amateur Radio Equipment
> ARRL * AMI#846 * DXCC
> E-Mail: jmiller@teleteam.net
> Visit My Home Page: <http://www.teleteam.com/~jmiller/>
> ***** Proud to be 100% Macintosh since 1984! *****
>
>

From: Thomas Lewandowski <tpl.dsc@discnet.com>
To: Old Tube Radios <boatanchors@theporch.com>
Message-ID: <36734C0A.709ADDD@discnet.com>
Date: Sat, 12 Dec 1998 23:09:30 -0600
MIME-Version: 1.0
Subject: 35W4 rectifier tube needed
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hello

I've got an open filament and need a replacement 35W4 rectifier tube.
Thanks for your help.

Tom Lewandowski N9DVT

Date: Sat, 12 Dec 1998 23:57:34 -0600 (CST)
From: Bill Hawkins <bill@iaxs.net>
Message-Id: <199812130557.XAA16495@citrus.iaxs.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Dyna-monsters

Personally, I've stayed away from aircraft radios because they have to be
densely packed (hard to work on) and they don't have to be quiet. The
ambient noise in military aircraft would drown out any dyno noise.

Regards,
Bill Hawkins

Date: Sun, 13 Dec 1998 08:25:30 -0500 (EST)
Message-Id: <199812131325.IAA08212@smtp13.bellglobal.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
To: Old Tube Radios <boatanchors@theporch.com>
From: Andre Guibert <aguibert@sympatico.ca>
Subject: Re: Dyna-monsters

Bonjour Bill and All

Try using the remote controls features, long cables are available.

I have original JB's and remote controls for most A/C radios and only very very few visitors have seen the motorised tuning/ band change operate.

Kids go crazy when the SCR522 operate.

Andre

PS

>Date: Sat, 12 Dec 1998 23:57:34 -0600 (CST)

>

>Personally, I've stayed away from aircraft radios because they have to be
>densely packed (hard to work on) and they don't have to be quiet. The
>ambient noise in military aircraft would drown out any dyno noise.

>

>Regards,

>Bill Hawkins

>

>

Message-Id: <v03102807b29960344037@[134.53.65.12]>

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

Date: Sun, 13 Dec 1998 09:26:00 -0400

To: Old Tube Radios <boatanchors@theporch.com>

From: Jim Garland W8ZR <4CX250B@miavx1.acs.muohio.edu>

Subject: One-hour fix for your KWM-1 PTO

Hi Gang,

Last Sunday's KWM-1 net on 14263 kHz reminded me that I needed to service the PTO in my KWM-1. The symptoms are familiar to all KWM-1 owners: jerky, stiff tuning, warbling, excessive drifting when cold. The cause is hardening of the original lubricant on the PTO drive screw. I'd been frightened away from PTO repair in the past, but thanks to words of encouragement and advice from my buddy Randy, W9ZR, I bit the bullet yesterday afternoon. The complete job, start to finish, took only one hour! Here are step-by-step instructions for this easy project for those of you who, like me, have been reluctant to mess with their KWM-1's PTO. Note that you don't have to remove the PTO from the transceiver, or unsolder any wires.

Needed tools and supplies: phillips screwdriver, bristol wrench for setscrews, solvent (acetone, alcholol, etc., Q-tips)

1. Remove the two top black screws from the plastic bezel, which will allow you to move the meter bracket and dial lamp out of the way.. Don't loosen the bottom screw on the bezel.
2. Remove the PTO tube and other tubes in the vicinity of PTO (V9, V10, V19, V22) to give yourself working room.
3. Loosen the two setscrews on the bushing that secures the PTO shaft to the circular plastic dial. There is no need to note the dial setting.
4. Loosen (don't remove) the two chassis screws holding the L-bracket (which secures the PTO assembly to the chassis), and slide the PTO and bracket toward the rear until the shaft frees itself from the bushing on the dial. Note that the L-bracket is slotted, so that it can slide free of the chassis screws. If the shaft sticks in the bushing (mine did), it can be easily popped loose with a large screwdriver.
5. Remove the L-bracket (two nuts) from the PTO, to give yourself room to move the PTO around. Set a washcloth under the PTO, so you don't scratch the chassis when you move the PTO. The cable attached to the PTO will allow you to move the PTO a couple of inches.
6. Remove the two setscrews on the bushing which is attached to the PTO shaft, as it emerges from the PTO. Set aside the bushing and U-shaped metal washer.
7. Remove the back cover of the PTO (six screws), and note the circular metal plate at the rear of the PTO coil.
8. Remove the two screws that secure the phosphor bronze grounding clip to the shaft at the front of the PTO. These screws run the length of the PTO coil, and secure the circular metal plate to the rear of the coil. CAUTION: When you remove the circular plate, there is a small glass ball bearing between the plate and the drive screw (which will probably be stuck either to the plate or the drive screw) . Don't lose this ball bearing or let it fall into the innards of the KWM-1! Set aside the ball bearing, circular metal plate, the two long screws, and the phosphor bronze grounding clip.
9. Remove the stainless drive shaft from the PTO by turning it. It will come out as an assembly with the ferrite slug attached, along with a bushing and several washers. Rotate the slug until it comes off the shaft. There is nothing tricky about removing the slug, but be careful not to bend the phosphor bronze clip which rides in shaft grooves. There is no need to remove the bushing or washers, but note the order in which they are attached in case they slide off the shaft.
- 10.. You'll note that the drive screw, bushing, etc. are covered with hardened grease. Clean everything with solvent and Q-tips, including the

inside of the slug (which has a brass sleeve), the grooves in the stainless shaft, and the phospher bronze clip that is attached to the slug. Also clean the slot in the PTO coil that the slug rides on. Also, clean the glass ball bearing, and the indentation in the circular plate that it rides in, and don't forget to clean the phospher-bronze grounding clip.

11. Put one drop of 3 in 1 oil on the ball-bearing bushing that is at the front of the shaft, and lubricate the glass ball, and shaft grooves with light grease. I used a teflon impregnated white lithium grease. Some people argue against using Lubriplate, because it will harden over the next forty years. You can use a new space-age grease if you want to spare your great grandchildren the chore of doing this again.

12. Reassemble the PTO and mount it back on the chassis, but leave the setscrews securing the shaft to the dial loose, until after calibration. Don't remount the meter bracket yet, but make sure the wires to it don't short against the chassis. Make sure the dial and dial set haven't slipped out of their friction drive pulleys. If they have, then put them back in the drive pulleys.

13. Turn on the KWM-1 and rotate the shaft until you find a signal at a known frequency. I used a signal generator set at 14050, but anything will do. Rotate the dial until it reads the correct frequency, and tighten the setscrews on the dial bushing to secure the shaft. Rotate the dial over its full range to make sure everything works right. The stops should occur at 10 kHz of overtravel at each end of the dial, and if they don't, then loosen the shaft bushing (not the dial bushing) and rotate it slightly on the shaft.

14. Remount the meter bracket and dial lamp, and you're done! The PTO should turn smoothly and easily, and all your warbling and drifting problems will be cured.

These instructions make the project sound much harder than it is. This is a very easy project, with no stumbling blocks or difficult points. Good luck!

73,

Jim Garland W8ZR

Date: Sun, 13 Dec 1998 10:34:23 -0500 (EST)
From: Sandra L Knepper <slkst29+@pitt.edu>
To: Old Tube Radios <boatanchors@theporch.com>

cc: boatanchors@theporch.com
Subject: Re: One-hour fix for your KWM-1 PTO
Message-ID: <Pine.GS0.3.96L.981213103403.27397D-100000@unixs5.cis.pitt.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Dave, W3ST
Publisher of the Collins Journal
Homepage: <http://www.pixi.com/~jenkins/collins>

On Sun, 13 Dec 1998, Sandra L Knepper wrote:

> Nice explanation that just about says it all. However, I am sure that to
> you and me this is a rather easy step by step by process. To many it is
> enough to make the cold beads of perspiration form on the brow. You are to
> be commended for sharing these instructions to the neophyte.
>
> Incidentally, this procedure was written up in the Collins Journal many
> years ago with diagrams. I do know that when doing this procedure, you
> can get yourself into big trouble if you fail to write down what you are
> doing as you move through the procedure. I often have to refer to the
> pictorals that sketch the PTO assembly both inside and outside. They were
> done by a subscriber in Canada, whom I am indebted to.
>
> Happy Holidays.
>
> Dave, W3ST
> Publisher of the Collins Journal
> Homepage: <http://www.pixi.com/~jenkins/collins>
>
>

Message-Id: <3.0.32.19981213101141.00ae1728@revealed.net>
Date: Sun, 13 Dec 1998 10:11:55 -0600
To: Old Tube Radios <boatanchors@theporch.com>
From: "James D. Mayfield" <kb9bnr@revealed.net>
Subject: Mil Tuning Units Sold
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

The Subject tells it like it is. Thanks

Dave Mayfield KB9BNR
Personal Web Page

<http://home.revealed.net/qste/bnr/kb9bnr.html>

Message-Id: <103130301b299a14270bb@[199.34.24.2]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Sun, 13 Dec 1998 10:55:21 -0600
To: Old Tube Radios <boatanchors@theporch.com>
From: "Jay H. Miller" <jmiller@teleteam.net>
Subject: Impedance Bridge- Clarification

The reason for my interest in the bridge is educational-- not to simply build ham antennas. Many of you have engineering backgrounds and vast years of experience in radio. I failed to get an engineering degree (decided to play photojournalist instead) and 25 years later I want to catch up!

73

***** ##### *****
Jay H. Miller, KK5IM Dallas, Texas
The Pocket Guide to Collins Amateur Radio Equipment
ARRL * AMI#846 * DXCC
E-Mail: jmiller@teleteam.net
Visit My Home Page: <http://www.teleteam.com/~jmiller/>
***** Proud to be 100% Macintosh since 1984! *****

Message-Id: <3.0.5.32.19981213121950.00824dc0@mail1.coastalnet.com>
Date: Sun, 13 Dec 1998 12:19:50 -0500
To: Old Tube Radios <boatanchors@theporch.com>
From: Al Parker <anchor@coastalnet.com>
Subject: Re: Impedance Bridge- Clarification
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi Jay,

a Boonton 250A Rx bridge (with manual) is about the greatest for education and doing good work IMHO. They can be found (with luck) for around \$100. I still have regrets over selling mine, tho' it went to a good home with a list member. Hank Van Cleef chided me privately for doing so. I've since found a 260 Q-meter, yet to be refurbished.

I find the Autek RF-1 RF Analyzer very handy for quick easy checks either on the roof or on the bench. But it's certainly not precision or lab grade.

73,

73,
Al, W8UT
New Bern, NC

Boat Anchors appreciated here
anchor@coastalnet.com

From: kf4kl@ipass.net (Doug Hall)
To: Old Tube Radios <boatanchors@theporch.com>
Cc: boatanchors@theporch.com
Subject: Re: Impedance Bridge
Date: Sun, 13 Dec 1998 18:51:19 GMT
Message-ID: <36760715.155684647@DOUGHALL>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: quoted-printable

On Sat, 12 Dec 1998 22:41:07 -0600, you wrote:

>I'd like to acquire a decent impedance bridge-signal generator-detector
>instrument suitable for some serious antenna work-- i.e. several steps =
up
>from the MFJ-259
>
>Any suggestions?
>
> ***** #*****# *****
> Jay H. Miller, KK5IM Dallas, Texas

Jay,

I've used all sort of gadgets for measuring impedance while doing antenna work, and for my money nothing beats the old GR-1606A. It's heavy and bulky, and you need a signal source and a detector, but the vast majority of the time it just plain works better than the current crop of boxes from MFJ, AEA, Autek, et al. For example, if you want to measure the feedpoint impedance of a 160m vertical or other large antenna and you have a strong local broadcast station close by (as I do) you can forget about getting an accurate reading from the MFJ-259 or similar units. Strong received signals drive them nuts. Ask the manufacturers - they'll confirm it. Even the high dollar HP Vector Impedance meter I borrowed from work gets fooled by strong local signals. The 1606A takes it all in stride. Furthermore, mine has been repeatedly more accurate than the '259, even in situations where strong local signals were not an issue. The MFJ, AEA, and Autek units have their places, but they aren't anywhere near the instrument a properly calibrated and maintained GR-1606A is. The GenRad bridge, combined with a Smith Chart, is one of the most versatile instruments I own. In the last few months I've used mine to design a base matching network for a 80/160m dual band vertical, a 2 element 80m vertical array, and to verify the tank design in a homebrew amp I'm building. In the case of the antennas, I measured the antenna Z, used the Smith

Chart to design the matching networks, and used the bridge to verify these networks. When they were installed the antennas worked right away, with no tuning or fussing necessary.

If you don't need the accuracy, or if you're not working with lower frequencies (near the BC band), or if being close is good enough, or if all you really care about is SWR, then you can get by with just about any of the new boxes. They're certainly a LOT easier to carry around. But I wouldn't swap my GR-1606A & matching oscillator for any of them.

73,

Doug Hall, KF4KL

From: Henry van Cleef <vancleef@netcom.com>
Message-Id: <199812131911.LAA07157@netcom11.netcom.com>
Subject: Re: Impedance Bridge- Clarification
To: Old Tube Radios <boatanchors@theporch.com>
Date: Sun, 13 Dec 1998 12:11:12 -0700 (MST)
Cc: boatanchors@theporch.com
MIME-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit

As Jay H. Miller discourses

>

> The reason for my interest in the bridge is educational-- not to simply
> build ham antennas. Many of you have engineering backgrounds and vast years
> of experience in radio. I failed to get an engineering degree (decided to
> play photojournalist instead) and 25 years later I want to catch up!

>

I may have my head slightly in the sand, because I dote on some toys of my youth that I learned to use over 40 years ago:

Boonton 250-A RX bridge
Boonton 260-A and 190-A Q meters
General Radio 650-A impedance bridge

There are later models for the 250 and the GR bridge (1650). Marconi made a very nice Q meter that uses separate Marconi oscillators, and Heath made usable, although less expensive and harder-to-calibrate accurately Q meters and impedance bridges.

These are pretty fundamental devices, in terms of what they measure, and if you don't know what the readings mean, you can draw some misleading conclusions. The Boonton 250 (I think around 4000 were made)---mine is a late HP-built unit---is probably the easiest of these devices to use. However, its oscillator operates between 500Kc and 250Mc and is so marked on the panel. Just hang the unknown across

the terminals after setting the frequency and nulling the bridge, then re-null the bridge. Unfortunately, its range of measurement is quite limited, and it is difficult to troll frequency to find the combination of values needed for null. One big plus is that almost all of its accuracy is in two variable capacitors used for balance.

The 260-A (50Kc to 50Mc), which was the last in the series (1953 to 60's) and 190-A(VHF above 260 range) is also quite easy to use, but requires some real rigor in technique to get believable results. Also, since it is an open-loop instrument, not a null-and-differential device, can give you some pretty big errors. A 260 with a set of standard coils (which I have) can, if used properly, give you about the same data as the 250-A, and is much easier to "troll for response" than the bridge. There were probably around 10,000 of the lower frequency Q-meters built (160-A, 260-A). The Boonton Q-meters have an Achilles heel in the thermocouple-type RF ammeters, and the Marconi and Heath units are more robust, in that they don't use a thermocouple. I'd avoid a 160-A, because it uses a "selected 45" for the oscillator and the thermocouple is much more prone to burnout.

I'll not here that the lowly grid-dip can give you a lot of the same information as a Q-meter or RX bridge, and has the advantage of being portable (you can dip a coil in-circuit).

The GR bridge uses DC (Wheatstone bridge) for resistance and 1000 Hz for AC (L and C), and is very good for things like audio components. Mine has an electronic oscillator, so doesn't use batteries (4 no. 6 cells and a microphone "hummer", and is reasonably accurate---although the interaction on L and C measurements between the LRC dial and the selected D or Q dial can be quite misleading---also, finding "null" can be a bit of a chore.

The best way to get smart about these boxes is to get them, get them working, and use them. I didn't really realize it until I got a 260-A with a set of standard coils last year, and started to use it, just how much "technique" I had learned in the years (now nearly 40 years ago) when I used a Q-meter regularly. Part of getting smart in using these boxes is to do checks on the same components on different boxes and seeing how well they correlate. A.G. Tannenbaum sells copies of the Boonton manuals, and these have enough information to get you started using the boxes.

So far as interpreting the results, you want to get your arms tightly wrapped around LRC theory. Terman's texts ("Radio Engineering" and "Radio Engineer's Handbook") will get you started, although Terman's treatments are not exhaustive (in terms of what the boxes will tell you). Also, Terman-Pettit's "Electronic Measurements" discusses some of the techniques used by the boxes, particularly the "current

magnification" methodology of Q-meters.

So far as learning theory goes, you can learn it without taking college courses if you are willing to devote some time and effort to it. Instrumentation techniques are, I think, a skill acquired from experience. The best way to sharpen them up is to consider just how many ways you can measure a device's parameters, and then use your instrumentation boxes to make those measurements on known good devices. You should be able to get correlation in your measurements, and with a little experimentation (hang a 1-megohm resistor across that coil and see what it does) to get some feel for what the reading parameters (which may require some arithmetic to convert to the parameters you want to know) do under various circumstances.

--

=====
Hank van Cleef
=====

Date: Sun, 13 Dec 1998 14:19:19 -0600
From: Mark Shaum <k9tr@cwix.com>
Subject: HR050 dial strips and 833 regen query
To: Old Tube Radios <boatanchors@theporch.com>
Message-id: <002001be26d5\$ff88d680\$162337a6@k9tr>
MIME-version: 1.0
Content-type: text/plain; charset="iso-8859-1"
Content-transfer-encoding: 7bit

Since I neglected to change my mail address within Outlook when my ISP changed until last week, I need to insure that I can still post without bouncing. Mailer ID vs. actual email address/spam filters etc. Besides, regarding winter BA projects:

I would like to locate dial "strips" for the E and F coils for my HR0-50T1.. I believe there was a listmember who produced reproduction scales, if that person could reply or I could be directed on an appropriate path, I'd appreciate it.

Also, I'm contemplating a large-bottle simple rig construction project for 80/160 this winter. Could be a push-pull 814 xtal osc, or a single 813 oscillator (as soon as I can verify the crystal currents involved. Finally a use for my RF milliamp meters!). Anyhoo, a matching large-bottle regen is also called for. While I don't have an 833 in my BA cigar box, was there ever an actual receiver built using that beautiful tube, or was that just one of those BA list legends?

73! - Mark

WTB list: HT33 A or B, any condition, midwest QTH..

Mark Shaum K9TR
email: k9tr@cwix.com
http://home.cwix.com/~k9tr@cwix.com
Central Illinois Grid EN50ii Zip 61721

From: "Ed Tanton" <n4xy@mindspring.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: RE: HR050 dial strips and 833 regen query
Date: Sun, 13 Dec 1998 16:03:20 -0500
Message-ID: <000201be26dc\$032a5880\$01010101@n4xy>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="Windows-1252"
Content-Transfer-Encoding: 7bit

Hi Mark... Larry Ware: Lawrence R. Ware [lrware@pipeline.com] sells the strips.

Date: Sun, 13 Dec 1998 16:30:59 -0500 (EST)
From: "Roberta J. Barmore" <rbarmore@indy.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: of (RF) bridges and their ilk...
Message-ID: <Pine.SUN.3.96.981213160946.13151A-1000000@indy3>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi!

There are a couple of other gadget that haven't been mentioned. One of the most interesting is the OIB, or Operating Impedance Bridge. "Operating" means you leave it in-circuit at full power in the manner of an RF wattmeter. One of the remaining instrument makers--Delta Electronics--holds the patent on this device, but granted an exception for hams who'd like to build one of their own. *Full* construction info shows up in '80s ARRL Handbooks. You need to have fair tinsmith's skills but it's not a huge project. ARRL version is good from 160m through 6m. At AM/BC stations driving directional arrays, these things are *wonderful,* telling you at a glance if something's gone wonky. Readings must be scaled from the "R" and "X" dials.

Another very flexible instrument is the Network Analyzer. Hewlett-Packard makes 'em (among others, but H-P's what I know). A good one is quite expensive (though the older versions with a monochrome display do show up on the used market). You can't use them at power, and the most prosiac I/O connector is a type N. "7mm" connectors are more typical of the interface; they'll get you up to where the GHz roam but they're not cheap. A "two box" design is most common, one with most of the samrts and another chosen for the precesion needed and frequency range of interest (a good S-plane adaptor will go from low HF though UHF but folks use NAs way higher than that!). They will tell you all sorts of things; data can be presented in Smith Cart, return loss vs. frequency, SWR vs. freq, log or lin amplitude, etc., and the freq can be swept (with user-selectable start and end point) or single-freq, etc. The learning curve is *real* steep...but they will do things no other device will do as well. (Howzabout SWR over a swept band vs. *distance?* Yep, they'll do that. Makes a time-domain reflectometer look like a kids toy!)

Drawbacks: this is a big, heavy, high-precision device. Even the very latest versions call for a two-man lift! And they're not cheap. But if you stumble over a Network Analyzer somewhere and the price is right, give it a long, close look. A couple of afternoons spent with one are worth an awful lot of classroom time!

73,
--Bobbi

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End of BOATANCHORS Digest 2337
